

**IN THE CLAIMS**

The following list, if entered, replaces all prior versions of the claims.

1-17. (Cancelled)

18. (Previously Presented) A method comprising:  
identifying a plurality of nodes of a network, wherein  
    said plurality of nodes are interconnected by one or more links;  
executing one or more tasks within each of said plurality of nodes of said network,  
    wherein said executing comprises  
    requesting, from at least one other node of said plurality of nodes, a format of data  
        transmitted over a link of said one or more links attached to said at least  
        one other node of said plurality of nodes,  
    generating first data identifying at least one node of said plurality of nodes at  
        which at least one of  
        inserted data is added, wherein  
            said inserted data is associated with said each of said plurality of  
            nodes, and  
        dropped data is dropped, wherein  
            said dropped data is associated with said each of said plurality of  
            nodes, and  
    generating second data indicating a format of in-transit data transmitted over said  
        one or more links;  
identifying a destination node of said in-transit data; and  
transmitting said in-transit data to said destination node using said first data and said  
second data.

19.-20. (Cancelled)

21. (Previously Presented) The method of claim 18, wherein  
said inserted data comprises data received by said each of said plurality of nodes from  
said network, and

said dropped data comprises data transmitted from said each of said plurality of nodes to said network.

22.    (**Currently Amended**)    The method of claim 18, wherein said executing comprises requesting at least one of:

        said inserted data from said node of said plurality of nodes at which said inserted data is added; and

        said dropped data from said node of said plurality of nodes at which said dropped data is dropped.

23.    (Cancelled)

24.    (Previously Presented)    The method of claim 18, wherein said requesting comprises:

    requesting at least one of a synchronous transport signal type and a synchronous transport module type.

25.    (**Currently Amended**)    The method of claim 18, wherein  
    said network satisfies at least one of a first condition and a second condition, wherein  
    said first condition is a failure, **[[and]]**  
    in a case of said first condition, said in-transit data is  
        switched from a failed link of said one or more links to a redundant link of  
        said one or more links, and  
        squelched, and  
    **in a case of** said second condition, **wherein** said in-transit data is  
        re-transmitted in data buckets to at least one predetermined node of said  
        plurality of nodes at regular intervals of time.

26. (Previously Presented) The method of claim 25, wherein said network satisfies said first condition, and said executing one or more tasks within each of said plurality of nodes to generate said first data comprises preventing misconnection by performing squelching.
27. (Currently Amended) The method of claim 25, wherein said network satisfies said second condition, and said executing one or more tasks within each of said plurality of nodes to generate said first data comprises for each data bucket, identifying at least one of said plurality of nodes at which said inserted data is added via said each data bucket[[;]], and said plurality of nodes at which said dropped data is dropped via said each data bucket.
28. (Previously Presented) The method of claim 18, further comprising: detecting a failure on a first link of said one or more links, wherein said in-transit data is communicated over said first link; identifying a redundant link of said one or more links; and switching traffic in response to said detecting by switching said in-transit data from said first link to said redundant link.
29. (Currently Amended) The method of claim 28, wherein said executing one or more tasks within each of said plurality of nodes comprises: executing said one or more tasks within each of said plurality of nodes before said failure occurs.
30. (Previously Presented) An apparatus comprising: means for identifying a plurality of nodes of a network, wherein said plurality of nodes are interconnected by one or more links; means for executing one or more tasks within each of said plurality of nodes, wherein means for executing comprises means for requesting, from at least one other node of said plurality of

nodes, a format of data transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes,

means for generating first data identifying at least one node of said plurality of nodes at which at least one of inserted data is added, wherein

    said inserted data is associated with said each of said plurality of nodes, and

dropped data is dropped, wherein

    said dropped data is associated with said each of said plurality of nodes, and

means for generating second data indicating a format of in-transit data transmitted over said one or more links, and

    said inserted data and said dropped data comprise at least one of data received by said each of said plurality of nodes from said network, and

    data transmitted by said each of said plurality of nodes to said network;

means for identifying a destination node of said in-transit data; and

means for transmitting said in-transit data to said destination node using said first data and said second data.

31. (Cancelled)

32. (Previously Presented)      The apparatus of claim 30, wherein said means for executing comprises:

    means for requesting said inserted data from said node of said plurality of nodes at which said inserted data is added; and

    means for requesting said dropped data from said node of said plurality of nodes at which said dropped data is dropped.

33. (Cancelled)

34. (Previously Presented)      The apparatus of claim 30, wherein said means for requesting comprises:

means for requesting at least one of a synchronous transport signal type and a synchronous transport module type.

35. **(Currently Amended)** The apparatus of claim 30, wherein said network satisfies at least one of a first condition and a second condition, wherein said first condition is a failure, **[[and]]** in a case of said first condition, said in-transit data is switched from a failed link of said one or more links to a redundant link of said one or more links, and squelched, and **in a case of** said second condition, **wherein** said in-transit data is re-transmitted in data buckets to at least one predetermined node of said plurality of nodes at regular intervals of time.

36. (Previously Presented) The apparatus of claim 35, wherein said means for generating said first data comprises means for preventing misconnection comprising means for performing squelching, if said network satisfies said first condition.

37. (Previously Presented) The apparatus of claim 35, wherein said means for generating said first data comprises means for identifying, for each data bucket, at least one of at least one of said plurality of nodes at which said inserted data is added via said each data bucket, and at least one of said plurality of nodes at which said dropped data is dropped via said each data bucket.

38. (Previously Presented) The apparatus of claim 30, further comprising: means for detecting a failure on a first link of said one or more links, wherein said in-transit data is communicated over said first link; means for identifying a redundant link of said one or more links; and means for switching traffic in response to said detecting by switching said in-transit data from said first link to said redundant link.

39. **(Currently Amended)** The apparatus of claim 38, wherein said means for executing one or more tasks within each of said plurality of nodes comprises:  
means for executing said one or more tasks within each of said plurality of nodes before said failure occurs.

40. (Previously Presented) A network node comprising:  
an interface, wherein  
said interface is configured to couple said network node to a network,  
said network comprises a plurality of nodes interconnected by one or more links,  
and  
said plurality of nodes comprises said network node; and  
a timing communications and control processor configured to  
identify said plurality of nodes,  
execute one or more tasks within network node, wherein  
said timing communications and control processor is configured to  
perform said execution by virtue of being configured to  
request, from at least one other node of said plurality of nodes, a  
format of data transmitted over a link of said one or more  
links attached to said at least one other node of said  
plurality of nodes,  
generate first data identifying at least one node of said plurality of  
nodes at which at least one of  
inserted data is added, wherein  
said inserted data is data associated with said each  
of said plurality of nodes, and  
dropped data is dropped, wherein  
said dropped data is data associated with said each  
of said plurality of nodes, and  
generate second data indicating a format of in-transit data  
transmitted over said one or more links, and  
said inserted data and said dropped data comprise at least one of  
data received by said each of said plurality of nodes from said  
network, and

data transmitted by said each of said plurality of nodes to said network,

identify a destination node of said in-transit data, and communicate said in-transit data to said destination node using said first data and said second data.

41. (Cancelled)

42. (Previously Presented) The network node of claim 40, wherein said timing communications and control processor is further configured to:

request, from at least one other node of said plurality of nodes, said inserted data from said node of said plurality of nodes at which said inserted data is added and said dropped data from said node of said plurality of nodes at which said dropped data is dropped.

43. (Cancelled)

44. (Previously Presented) A machine-readable storage medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions when executed are configured to cause said machine to perform a method comprising:

identifying a plurality of nodes of a network, wherein said plurality of nodes are interconnected by one or more links; executing one or more tasks within each of said plurality of nodes to request, from at least one other node of said plurality of nodes, a format of data transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes, generate first data identifying at least one node of said plurality of nodes at which at least one of inserted data is added, wherein said inserted data is associated with said each of said plurality of nodes, and dropped data is dropped, wherein said dropped data is associated with said each of said plurality of nodes, and

generate second data indicating a format of in-transit data transmitted over said one or more links;  
identifying a destination node of said in-transit data; and  
communicating said in-transit data to said destination node using said first data and said second data.

45. **(Currently Amended)** The machine-readable storage medium of claim 44, wherein said inserted data and said dropped data comprise[[s]] at least one of[,,] :

data received by said each of said plurality of nodes from said network, and data transmitted by said each of said plurality of nodes to said network.

46. **(Previously Presented)** The machine-readable storage medium of claim 45, wherein said executing comprises:

requesting, from at least one other node of said plurality of nodes, said inserted data from said node of said plurality of nodes at which said inserted data is added and said dropped data from said node of said plurality of nodes at which said dropped data is dropped.